Operating Instructions

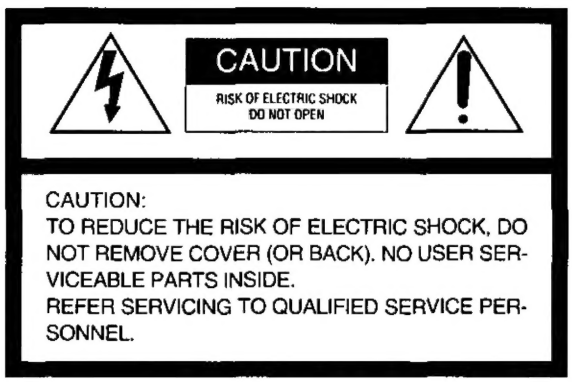
Video Imager

WE-MV180

Panasonic®

Before attempting to connect or operate this product, please read these instructions completely

CONTENTS



SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For U.S.A.

Warning:
This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

The serial number of this product may be found on the rear of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. WE-MV180

Serial No. _____

WARNING:
TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PREFACE

The Video Imager WE-MV180 is designed for showing images of documents or objects to an audience by projecting them on a video monitor.
Rotating the camera allows you to shoot and project or record a lighted object placed on the stage of the WE-MV180 or on a wall near the unit as well as the face of a speaker.
Images on transparent documents or camera film are projected by means of backlighting.
The WE-MV180 is also equipped with external video/audio input connectors for a variety of video sources.

FEATURES

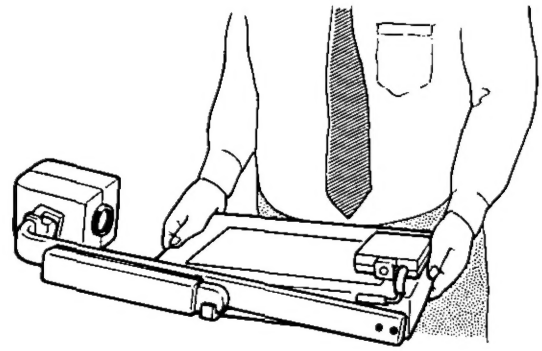
- High resolution and high quality picture by use of digital processing IC's and a 768-horizontal pixel CCD image sensor.
  Horizontal Resolution: 460 lines
  Vertical Resolution: 350 lines
- Times twelve power zoom lens with close-up lens.
- Equipped with composite video and S-video connector.

PRECAUTIONS

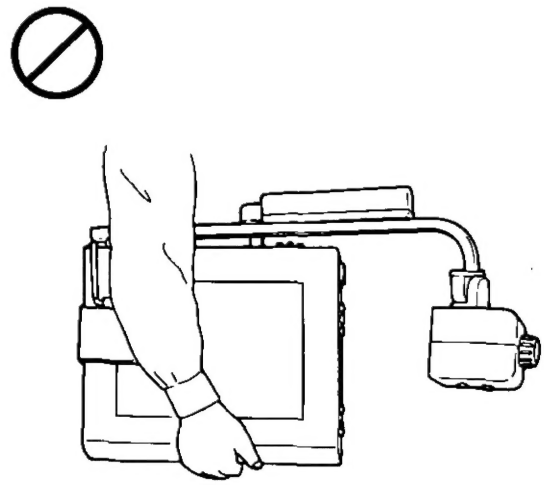
- Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers. There are no serviceable parts inside. Refer maintenance to qualified service personnel.
- Handle the appliance with care.
  Do not strike or shake, as this may damage the appliance.
- Do not expose the appliance to water or moisture, nor try to operate it in wet areas.
  Take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture can damage the appliance and also cause electric shock.
- Do not use strong or abrasive detergents when cleaning the appliance body.
  Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use mild detergent and wipe gently.
- Do not operate the appliance beyond its specified temperature, humidity or power source ratings.
  Do not use the appliance in an extreme environment where high temperature or high humidity exists.
  Use the appliance at temperatures within 5°C - 35°C (41°F - 95°F) and a humidity below 80%. The input power source for the appliance is 120V AC 60 Hz.

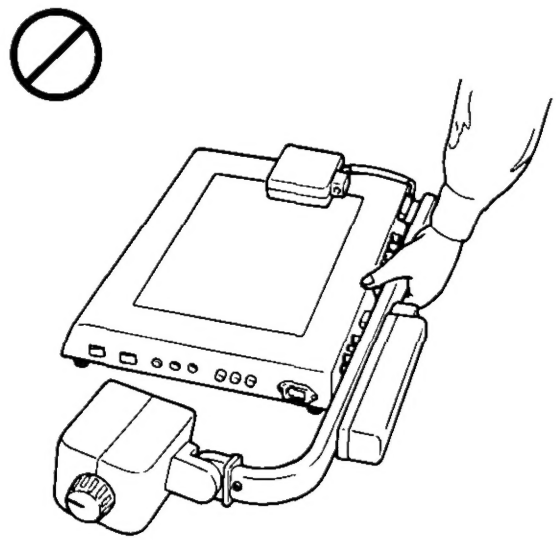
IMPORTANT NOTICE

When you carry this appliance, hold the stage of the unit as shown in the illustration below.

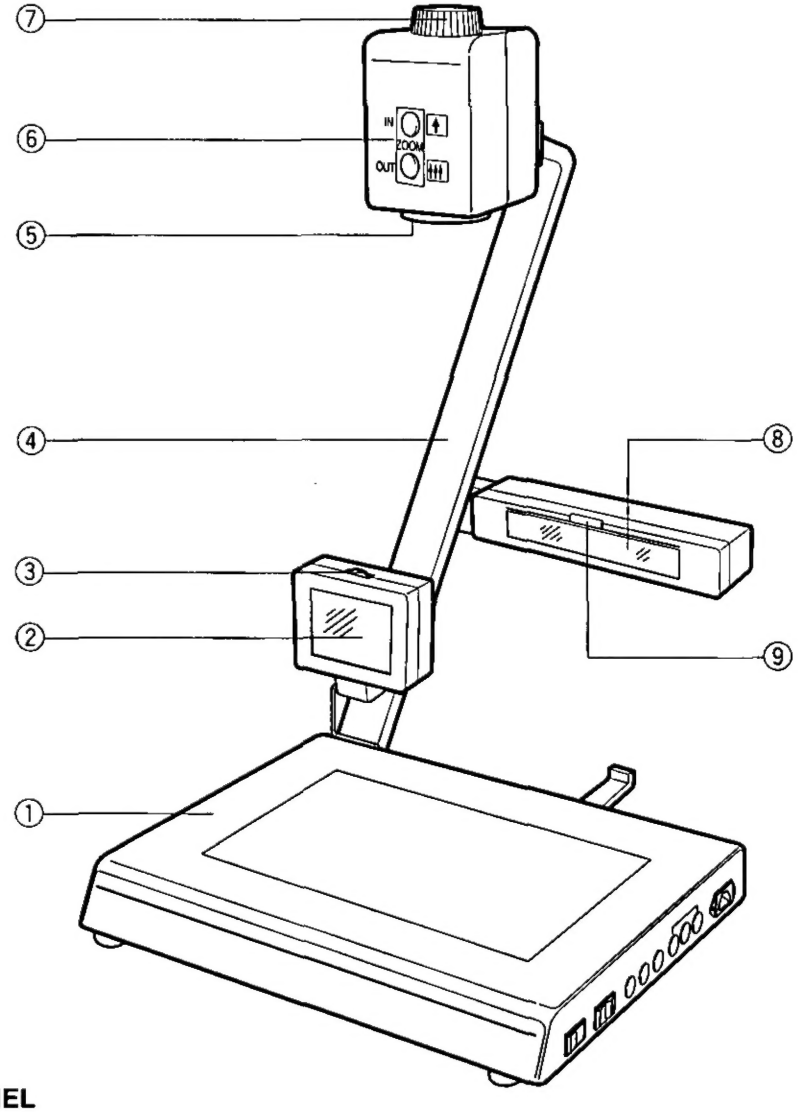


Do not hold the camera arm, the arm light, or LCD monitor as shown in the illustration below.

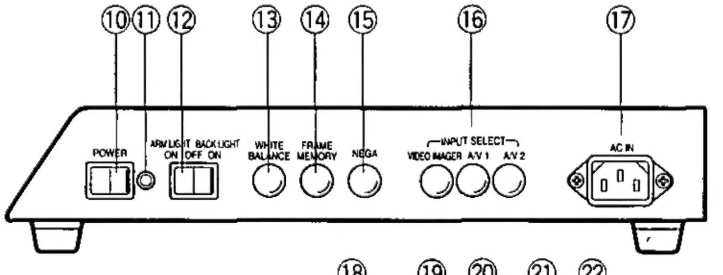




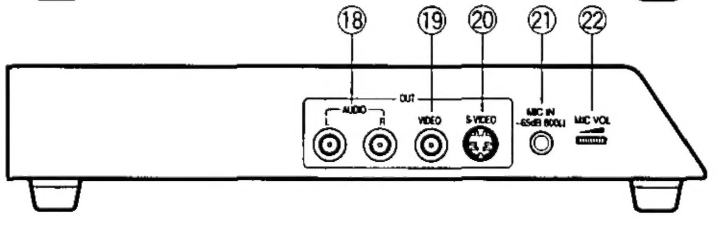
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS



■ RIGHT-SIDE PANEL



■ LEFT-SIDE PANEL



① **Stage** (with back light)
Place the object on here.
The stage is lit up by turning the back light on. Place the transparent documents or film on here to project them on a video monitor.

② **LCD Monitor**
The visual image of the document on the stage is projected on this liquid crystal display monitor.

③ **Brightness Control (BRIGHT, BRT/ DARK)**
This dial is used to control the brightness of the monitor.
Rotate the dial to the left to make the image brighter or to the right to make it darker.

④ **Camera Arm**

⑤ **Lens**
The close up lens and lens cap are attached to the lens. When you use this appliance, detach the lens cap. When the distance between the lens and the object to be shot is more than 2m (6.6 ft), detach the close-up lens by rotating it to the left.

⑥ **Zoom Buttons (ZOOM, IN, OUT)**
These buttons are used to zoom the object IN or OUT.

⑦ **Camera Rotation Dial**
This dial is used to rotate the camera inside the camera unit.

⑧ **Arm Light**

⑨ **Arm Light Shade**
The arm light shade blocks upward leakage of light when the arm light is lit. Pull this out when you need to block upward leakage of light.

⑩ **Power Switch (POWER)**

⑪ **Power indicator**
When you turn the power on, the POWER indicator lights up.

⑫ **Light Selector**
(ARM LIGHT ON, OFF, BACK LIGHT ON)
This selector is used to turn the arm light or the back light on and off.

⑬ **Auto White Balance Button (WHITE BALANCE)**
This button is used to set the white balance when shooting a transparent document or a film with the arm light or backlight lit.
Press this button. It takes about two seconds for the auto white balance function to adjust the white balance properly.
Note:
Press this button to shoot a negative film, or a positive film after having shot a negative film.

⑭ **Frame Memory Button (FRAME MEMORY)**
This button is used to memorize the document on the stage (frame memory function). Before changing the document on the stage, press this button. The visual image of the document is memorized and projected on the screen. After changing the document, press this button again. The visual image of the new document on the stage is projected on the screen.
Notes:
- See page 8 for details.
- The frame memory function works only when the input selector is set to VIDEO IMAGER.

⑮ **Nega Button (NEGA)**
This button is used to project a positive image of a negative film. Place the negative film on the stage and zoom to proper size. Then press this button, followed by the white balance button.

⑯ **Input Selector (INPUT SELECT: VIDEO IMAGER, A/V 1, A/V 2)**
This selector is used to select the audio/video signal from three sources.
When VIDEO IMAGER is selected, the camera signal of the WE-MV180 is provided to the video output connectors.
When both A/V 1 and A/V 2 are selected, the external audio/video signal is provided to the AUDIO OUT connectors (L/R,) the S-VIDEO OUT connector, and the VIDEO OUT connector.

⑰ **Power Cord Connector**

⑱ **Audio Output Connectors (AUDIO OUT L/R)**
The audio signal from the external source that is selected with the input selector and the microphone audio are provided to the AUDIO OUT L/R connectors.
Notes:
- This appliance does not have a built-in power amplifier unit. Do not connect the speakers with these connectors directly.
- The audio supplied to the MIC IN connector is always audible regardless of the position of the input selector.

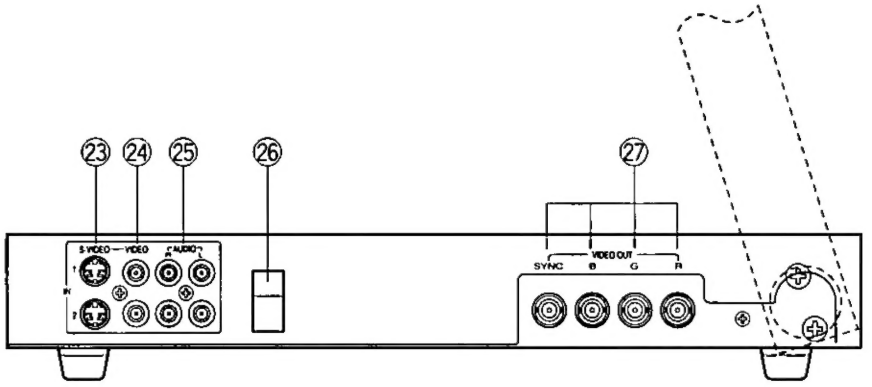
⑲ **Composite Video Output Connector (VIDEO OUT)**
This connector supplies the 1.0 [p-p]/75Ω composite video signal to the video monitor.

⑳ **S-Video Output Connector (S-VIDEO OUT)**
This connector supplies the S-Video signal to the video monitor.

㉑ **Microphone Input Connector (MIC IN –65dB 600Ω)**
This connector is used to connect the microphone.
Note:
Make sure that the specified microphone (–65 dB, 600Ω) is used.

㉒ **Microphone Volume (MIC VOL)**
This dial is used to adjust the microphone volume.

■ REAR PANEL



㉓ **S-Video Input Connectors (S-VIDEO IN 1, 2)**
The S-Video signal from the external source is supplied to these connectors.

㉔ **Composite Video Input Connectors (VIDEO IN 1, 2)**
The composite video signal from the external source is supplied to these connectors.
Note:
When both the S-video input connector and the composite video input connector are used at the same time, only the S-video connector is selected for the input source.

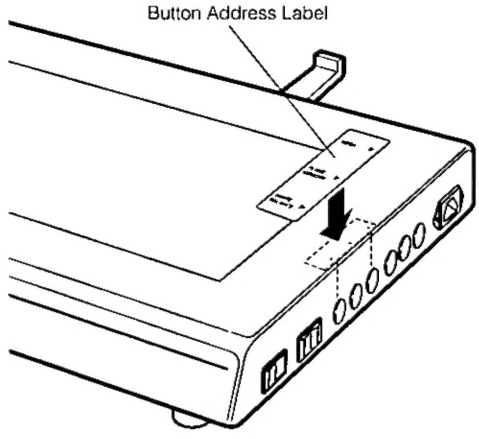
㉕ **Audio Input Connectors (AUDIO IN L/R 1, 2)**
The audio signal from the external source is supplied to these connectors.

㉖ **Arm Holder**

㉗ **RGB Video Output Connectors (SYNC/R/G/B)**
These connectors are used for connection to a monitor or projector provided with an RGB input connector.
Cautions:
- To prevent signal loss, connect a BNC cable that is not longer than 3 m (not supplied). If the BNC cable is longer than 3 m, use a cable compensator.
- Connect the SYNC connector to a monitor that is provided with an RGB connector.

■ Button Address Label (supplied accessory)

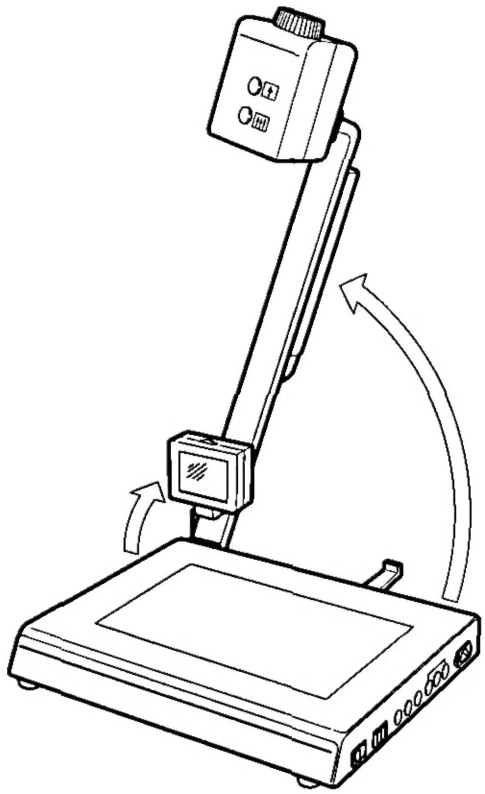
To help you locate the WHITE BALANCE, NEGA and FRAME MEMORY buttons from the top of the stage, apply the button address label on the stage as shown below.



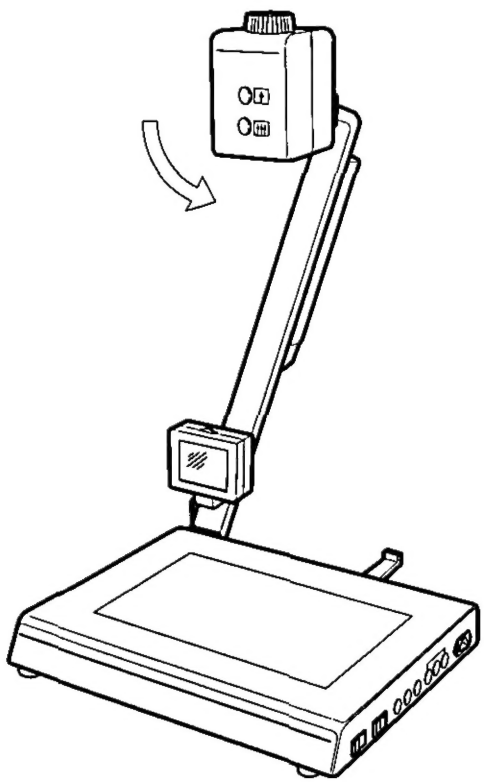
SETTING UP THE UNIT

■ To shoot a document on the stage

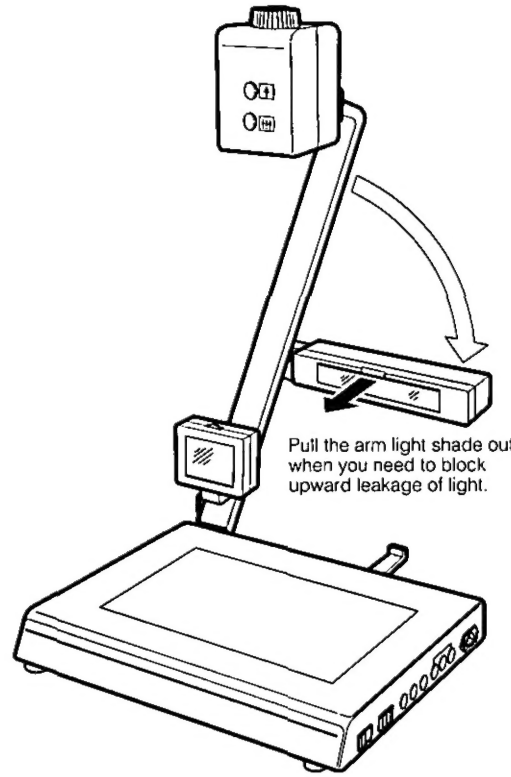
1. Raise the camera arm and the LCD monitor until it stops.



2. Turn the camera to face the stage.



3. Fold the arm light down to position it parallel with the stage and turn it to face the stage.

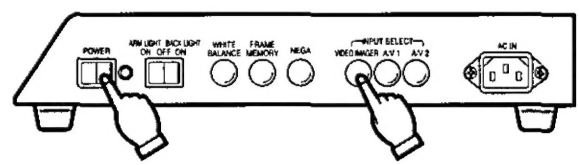


4. Press the ON side of the POWER switch located on the right side of the unit. The power indicator lights up and the image the camera is shooting appears on the LCD monitor.

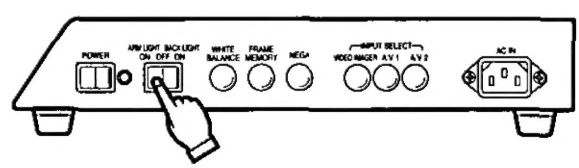
   Note:

   It will take about nine seconds to display the image on the video monitor after turning the power on.

5. Press the VIDEO IMAGER button of the input selector.



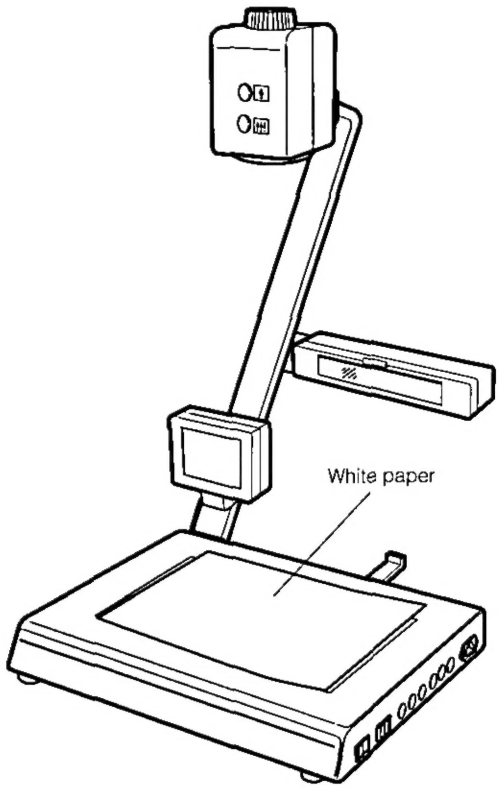
6. Set the light selector to ARM LIGHT ON by pressing the left side of the light selector.

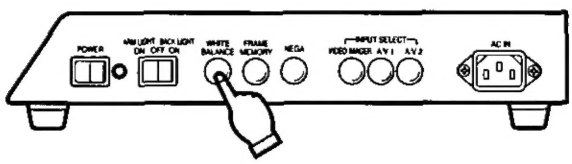


7. Place a white paper on the stage. Press the ZOOM button on the camera to zoom the white paper, and then the WHITE BALANCE button located on the right side of the unit. It takes about two seconds until the image is properly adjusted.

Note:

Repeat the above white balance adjustment if lighting conditions have changed.





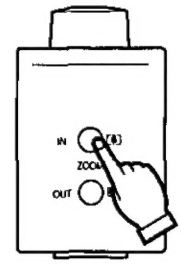
8. Place the document or object on the stage. An object with sharp edges that could scratch the stage should be placed on the back light protection sheet.

9. Adjust the camera position to shoot the object to be displayed in the center of the LCD monitor.

10. Press the ZOOM button on the camera to adjust the size and position of the document or object to be shot.

Note:

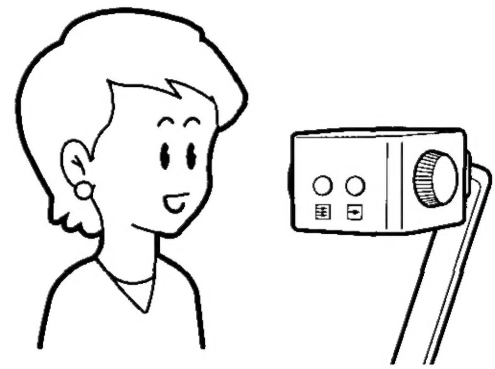
- The zoom ratio will be reset if you turn the power off after adjusting the size with the ZOOM buttons.



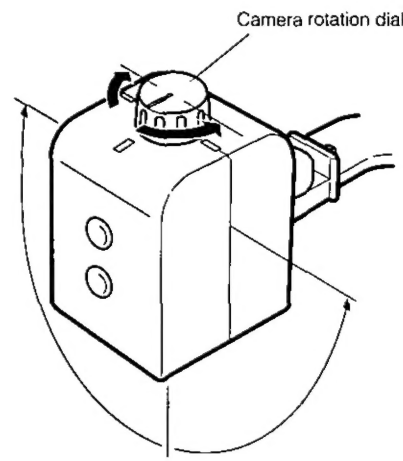
■ To shoot a lighted object on the wall, or the face of a speaker

1. Raise the camera arm with the LCD monitor until it stops.

2. Aim the camera at the object on the wall or at the lips of the speaker.



To display the image in the proper position, turn the camera rotation dial to the left or right so as to match the marks on the dial with those on the camera unit.



Caution:

Do not turn the camera beyond 90 degrees or force it beyond its end position. This could damage the joints of the camera arm.

3. Press the ON side of the POWER switch located on the right side of the unit. The power indicator lights up and the image the camera is shooting appears on the LCD monitor.
   Note:
   It will take about nine seconds to display the image on the video monitor after turning the power on.

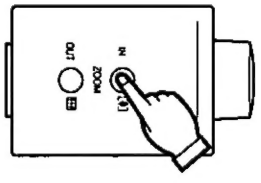
4. Press the VIDEO IMAGER button of the input selector.

5. Set the light selector to ARM LIGHT ON by pressing the left side of the light selector.

6. Press the ZOOM button on the camera to zoom the object (zoom on the wall or the lips of the speaker) and then press the WHITE BALANCE button located on the right side of the unit. It takes about two seconds until the image is properly adjusted.
   Note:
   Repeat the above white balance adjustment if lighting conditions have changed.

7. Adjust the camera position to shoot the object on the stage or the lips of the speaker.

8. Press the ZOOM button on the camera to adjust the size of the object to be shot.
   Note:
   The zoom ratio will be reset if you turn the power off after adjusting the size with the ZOOM buttons.



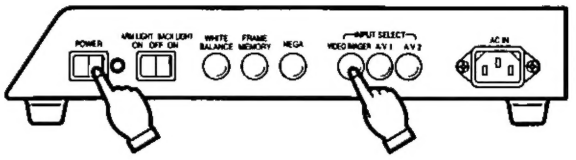
■ To shoot a transparent document or film

1. Raise the camera arm with the LCD monitor until it stops.

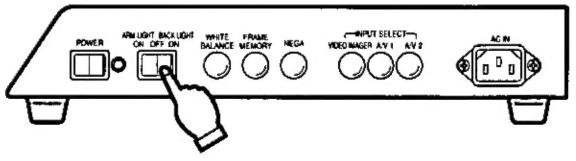
2. Turn the camera to face the stage.

3. Press the ON side of the POWER switch located on the right side of the unit. The power indicator lights up and the image the camera is shooting appears on the LCD monitor.
   Note:
   It may take about nine seconds to display the image on the video monitor after turning the power on.

4. Press the VIDEO IMAGER button of the input selector.



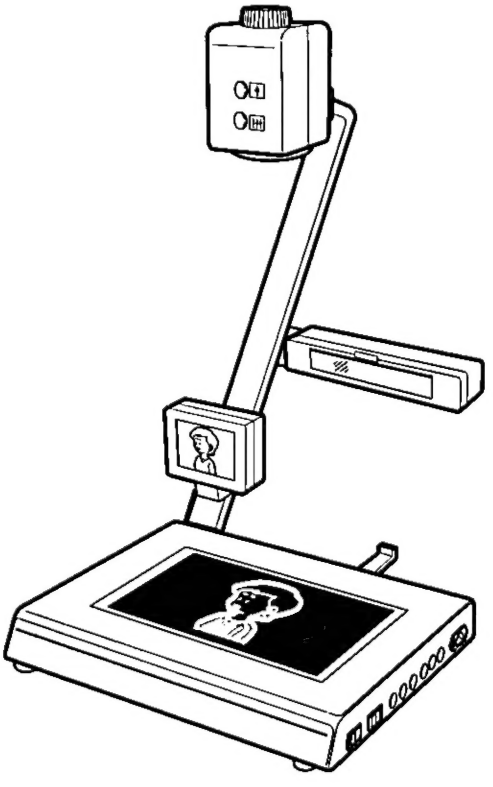
5. Set the light selector to BACK LIGHT ON by pressing the right side of the light selector.



6. Place the transparent document or film on the stage.

7. Press the ZOOM button on the camera to adjust the size of the transparent document or film to be shot.
   Note:
   The zoom ratio will be reset if you turn the power off after adjusting the size with the ZOOM buttons.

8. Press the NEGA button to shoot a negative film. The positive image of the negative is projected on the monitor.
   Skip this step if you are shooting a transparent document or positive film.
   Note:
   The reproduction of certain negatives may not be possible.



9 Press the WHITE BALANCE button located on the right side of the unit It takes about two seconds until the image is properly adjusted

Note

- Repeat the above white balance adjustment to shoot a transparent document or positive film after having shot a negative film, or if lighting conditions have changed

■ Frame Memory Function

1 To shoot document A, press the FRAME MEMORY button The image of document A is memorized The LCD monitor and the video monitor display the same image of document A

2 Exchange document A on the stage with document B The image of document A remains on the video monitor, but the LCD monitor displays document B While observing the LCD monitor position the image properly and use the ZOOM buttons to adjust the size of the displayed image

3 Press the FRAME MEMORY button This displays the image of document B on the video monitor

Note

This function works only when VIDEO IMAGER is selected for the input selector The memorized image will be erased if you select A/V1 or A/V2 for the input selector or turning the power off

■ To display VCR or video disc player images on the monitor (Input Selector)

By setting the input selector, images from two external sources such as a VCR or video disc player can be displayed on the monitor in addition to the camera image

■ By pressing the VIDEO IMAGER button

The image shot by the camera of this unit is displayed on the monitor When the microphone is connected to the MIC connector, the audio from the microphone is also monitored

■ By pressing the A/V 1 button

The monitor reproduces the image and audio from a VCR or video disc player connected to the S-VIDEO IN 1, VIDEO IN 1, or AUDIO IN L/R 1 connectors on the rear of the unit When the microphone is connected to the MIC connector the mixed audio from the microphone and the VTR is monitored

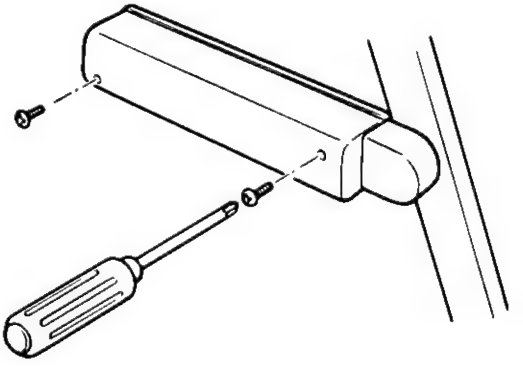
■ By pressing the A/V 2 button

The monitor reproduces the image and audio from a VCR or video disc player connected to the S-VIDEO IN 2, VIDEO IN 2, or AUDIO IN L/R 2 connectors on the rear of the unit When the microphone is connected to the MIC connector, the mixed audio from the microphone and the VCR is monitored

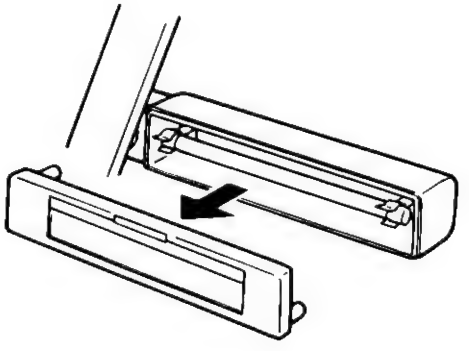
REPLACEMENT OF THE FLUORESCENT LAMP

Before you replace the fluorescent lamp, make sure the power is off and the power cord is disconnected from the AC outlet.

1. Hold the arm light, and remove the two fixing screws on its rear.

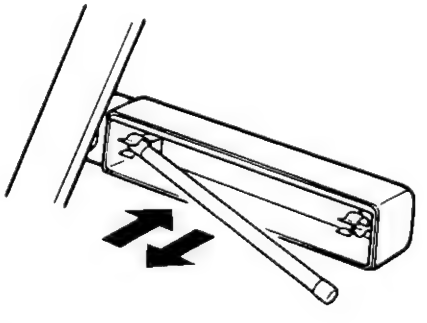


2. Remove the cover of the arm light.



3. First detach one end of the lamp and then the other. Do not touch the glass part of the lamp with naked hands.

4. Insert the new lamp with one end first and then with the other. Make sure that the lamp is fixed correctly and firmly.



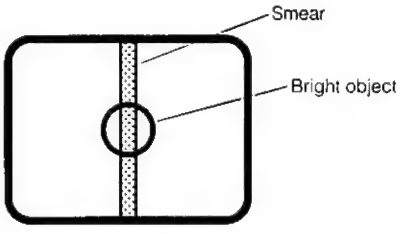
Note:

Use 6W 12V fluorescent lamps.

5. Fix the arm light cover by fastening the screws.

PREVENTION OF BLOOMING AND SMEAR

When the camera is aimed toward spotlights or other bright lights and light reflecting objects, a vertical stripe (smear) or blooming may appear. Therefore, the camera should be operated carefully in the vicinity of extremely bright objects to avoid the vertical stripe (smear) or blooming.



TROUBLESHOOTING

If the unit does not function as described in these operating instructions, perform the following checks:

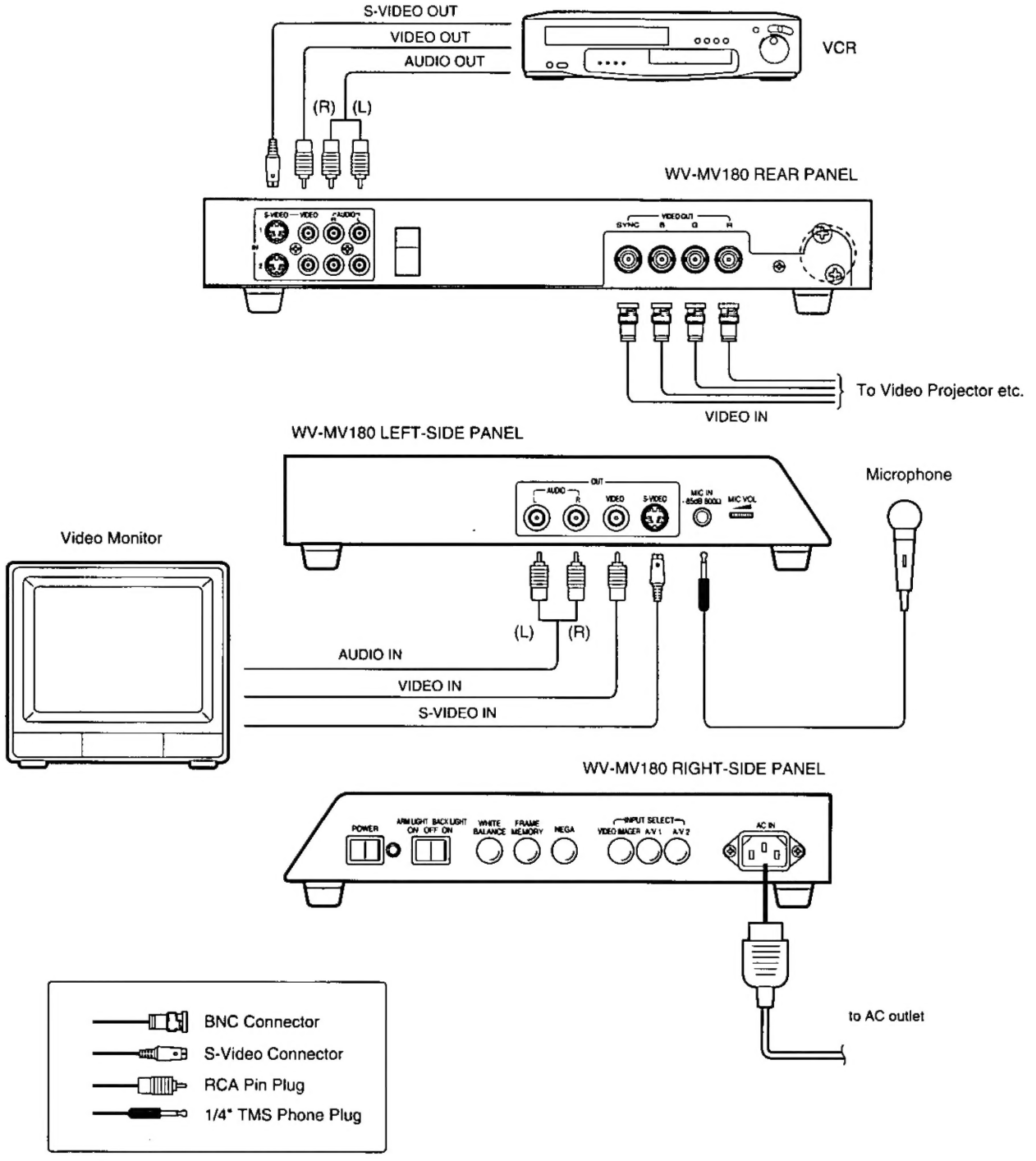
- No image appears on the monitor.
  - Is the power of the monitor turned on?
  - Are the cables connected correctly and firmly?
  - Is the input selector set to the correct position for the source?
  - Has the lens cap been removed from the camera lens?
- No image appears on the LCD monitor.
  - Try to rotate the BRIGHT dial on the LCD monitor.
- The auto focus does not work correctly.
  - Is the object height less than 15cm? If the object height is more than 15cm, the auto focus may not work correctly.
  - Is the camera arm in proper shooting position?
  - Is the lens clean? If it is dirty, the auto focus will not work correctly. Clean the lens and turn the power on again.

MAINTENANCE OF THE LENS

When the lens is dirty, the image becomes blurred or dust is displayed on the monitor. In this case, clean the lens as follows:

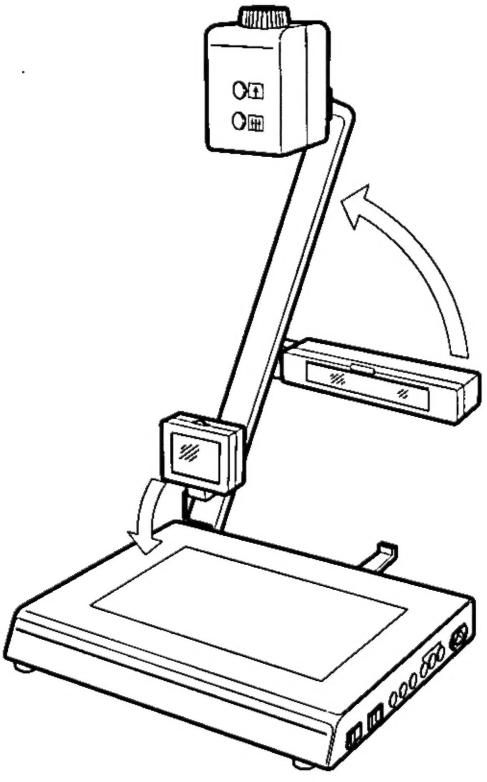
1. Blow the dust off the lens with an air spray nozzle for precision instrument use.
2. Wipe the lens with a soft cloth and cleaning liquid sold for cleaning glasses or camera lenses.

CONNECTIONS

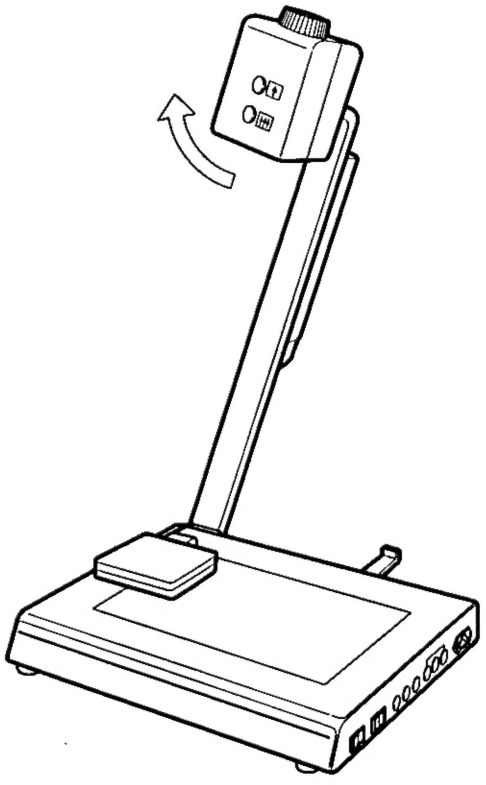


STORAGE OF THE UNIT

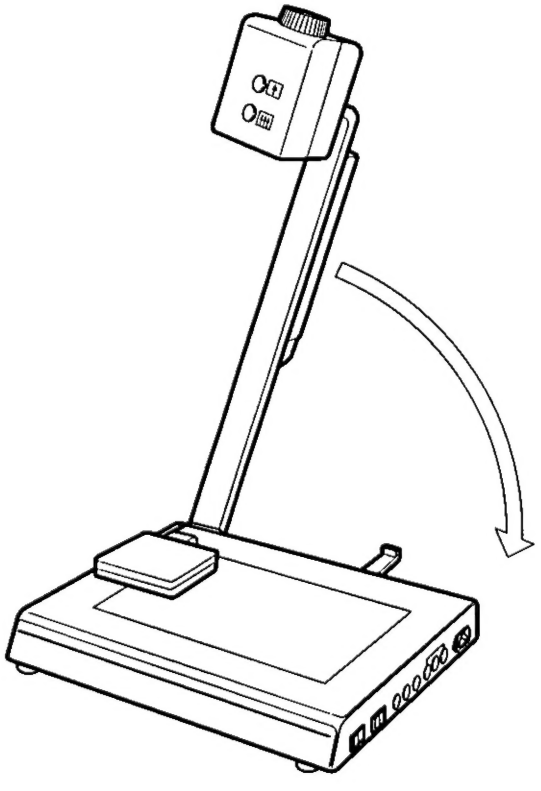
1. Turn the POWER switch off. The power indicator goes off.
2. Disconnect the cables from this appliance. Folding the camera arm with the cables connected may damage this appliance.
3. Attach the lens protection cap to the lens.
4. Fold the arm light behind the camera arm and the LCD monitor onto the stage.



5. Rotate the camera with the camera arm.



6. Press down the camera arm until it stops on the camera arm holder.



SPECIFICATIONS

■ CAMERA UNIT

Pick-up Device:	768 (H) x 494 (V) pixels, 1/3" Interline Transfer CCD
Scanning System:	2:1 Interlace
Scanning:	525 lines/60 fields/30 frames
Horizontal:	15.734 kHz
Vertical:	59.94 Hz
Video Output:	1.0 V[p-p] NTSC composite, 75Ω
S-Video Output:	Y: 1.0 V[p-p] 75Ω
	C: 0.286 V[p-p] (Burst Level), 75Ω
Horizontal Resolution:	460 lines (at center)
Signal-to-Noise Ratio:	48 dB
White Balance:	Automatic
Shutter Speed:	1/100 Flickerless

■ Lens Unit

Focal Length:	5.4 - 64.8 mm (12X)
Maximum Relative Aperture:	F1.8 - F2.7
Zoom:	Electronic power
Focus:	Auto Focus

■ Liquid Crystal Display Unit

Size:	2.9 inch
Brightness:	Manually adjustable
Resolution:	480 (H) x 146 (V) pixels

■ Main Unit

Video Input:	1.0 V[p-p] composite/75Ω, RCA standard jack (X2)
S-Video Input:	Y: 1.0 V[p-p]/75Ω,
	C: 0.286 V[p-p] (Burst Level)/75Ω, Mini DIN 4-pin connector (X2)
	(Direct out via Input Selector)
Audio Input:	RCA standard jack (X2)
Microphone Input:	–65 dB/600Ω, phone jack, unbalanced
Video Output:	1.0 V[p-p] composite/75Ω, RCA standard jack (X1)
S-Video Output:	Y: 1.0 V[p-p]/75Ω,
	C: 0.286 V[p-p] (Burst Level)/75Ω, Mini DIN 4-pin connector (X1)
Audio Output:	–20 dBV (1V = 0 dBV), RCA standard jack
Fluorescent lamp:	6W, 12V
Ambient operating Temperature:	+5°C - +35°C (41°F - 95°F)
Power Source:	120V AC, 60 Hz
Power Consumption:	Approx. 28W
Dimension:	400 (W) x 690 (H) x 365 (D) mm
	15-3/4" (W) x 27-3/16" (H) x 14-3/8" (D)
Weight:	8.1 kg (17.8 lbs.)

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.

ACCESSORIES

AC cable 1
Stage protection sheet 1
Button Address Label 1

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